

REMARKS

Claims 1 - 15 remain active in this application. Amendment of claim 1 has been requested to repeat language from the claim preamble for emphasis and to assure that such language is accorded patentable weight in addition to the clear and unambiguous antecedent language reference. No new matter has been introduced into the application. The withdrawal of the previous grounds of rejection is noted with appreciation as is the continued indication that claims 6 and 13 are directed to allowable subject matter.

Claims 1 has now been rejected under 35 U.S.C. §103 as being unpatentable over Macy et al. and claims 2 - 5, 7 - 12 and 14 - 15 have been rejected under 35 U.S.C. §103 as being unpatentable over Macy et al. in view of Cheney et al. These grounds of rejection are respectfully traversed.

As previously pointed out, the invention is directed to the function of scaling of images *transmitted in a compressed and encoded form* at the location of the set-top box (STB) to provide arbitrarily positioned images of arbitrary aspect ratio on the display screen, possibly in a picture-in-picture format under control of a user and is principally concerned with problems of latency, decoding time and minimization of additional memory and cost thereof which may be required to do so reliably and unconditionally. As described in detail in the specification with reference to Figures 1B and 2, the decoding and decompression of images, particularly moving images in which some images are decoded with bi-directional reference to past and future fields or frames, is extremely complex and decoding time for a field or frame within the corresponding display time of a field or frame even without scaling or positioning cannot be guaranteed while scaling and/or positioning

reduces the time available for decoding. The invention as recited in claim 1 solves this problem by synchronizing the decoder for decoding the compressed data with the display of the bottom border (coincident with the end of display of a decoded image) if the image is scaled and/or positioned which thus recovers the potential decoding time which would otherwise be lost in the bottom border while avoiding increase of latency by field or frame intervals and allowing required storage for the top and bottom border periods to be provided by much more economical spill buffer arrangements, the capacity of which can be based entirely on economic concerns.

Macy et al. is directed to watermark detection and thus has virtually nothing to do with such a system. As disclosed in Macy et al., a watermark is essentially a pattern of slight variations in *image values of image display or reproduction data* which are preferably not visible but can be used to establish origin of the data since the watermark cannot readily be tampered with or removed from the image data. Coincidence of the variations of image data in accordance with a pattern of a known watermark corresponding to a source of the data can thus establish that the image originated from a source which applied the watermark to the image. The difficulty in detecting a watermark, however, as discussed at column 1, line 55+, of Macy et al. is that watermark detectors must assume that the location and size of the watermark are the same as in the original image in order to locate the watermark pattern and determine coincidence of the watermark pattern in the image with the applied watermark pattern. This assumption fails and renders watermark detection extremely difficult if the image has been cropped or framed (which effectively changes the position of the watermark within the image borders) and/or scaled (which also changes the size of the watermark and the

pattern within it. Macy et al. addresses these problems by further superimposing bands of image value variation on the image much in the nature of a watermark but in addition to it. Thus, by determining location and spacing of the bands, any changes in watermark position relative to image borders and/or scaling may also be determined so that relative positioning and scaling of the image (containing the watermark) may be reversed to facilitate watermark detection, as discussed in detail in columns 15 - 16 with reference to Figure 9 on which the Examiner relies.

While the passage relied upon by the Examiner uses the terms "decoder" and "synchronize", there is no indication that "watermark decoder" refers to anything other than a "watermark detector" (as the latter term is used at column 1, lines 56 - 57) possibly supplemented by processing to reverse scaling and/or cropping or framing which may have been performed on the image and it is clear that "synchronize" merely refers simply to effectively overlaying a known watermark pattern of a detector onto the watermark in the image so that coincidence can be determined and such synchronization is performed on the basis of the bands rather than any edge of the watermark or border outside the watermark even if the watermark pattern is considered to be an image. (The quotation in the discussion of the rejection is from claim 1 and is not found in Macy et al.) Such operations have nothing to do with the operations required for positioning and scaling an image (which are assumed but not performed in Macy et al.) and do not even operate of the data recited in the claims (e.g. detection of an *image value* variation pattern as opposed to "a decoder for decoding *compressed image data*", as recited in claim 1, emphasis added) or involve the complexity of decoding of compressed image data or doing so within available time

constraints or recovery of time decoding time lost by such positioning and/or scaling to actually relax the time constraints which would otherwise be imposed or further restricted.

More specifically, the Examiner admits that Macy et al. does not disclose or suggest determining a frame switch point indicating completion of decoding of a previous frame which supports the meritorious effects of the invention by defining the beginning point of the recovered decoding time in accordance with the invention. Thus, the Examiner explicitly admits that Macy et al. has nothing to do with realizing the meritorious effects of the invention and cannot lead to an expectation of doing so by synchronizing a decoder to that point in time. Moreover, the Examiner clearly ignores the recitation of data on which the decoder, so synchronized, operates notwithstanding the clear and unambiguous antecedent language reference to "decoder *for decoding compressed image data*" (emphasis added) which has been repeated for emphasis in the requested amendment above.

Accordingly, it is respectfully submitted that Macy et al. does not provide teachings, suggestions or evidence of a level of ordinary skill in the art which would support a conclusion of obviousness in regard to claim 1 or any claim depending therefrom. The Examiner has not made and cannot make a *prima facie* demonstration of obviousness of any claim based thereon. Rather, the discussion of Macy et al. relative to the claimed invention appears throughout to be a hindsight reconstruction based on a few terms which have clearly been misconstrued contrary to their clear import in the context of Macy et al. and which still fails to answer salient and explicit recitations of claim 1.

In regard, to the ground of rejection based on Macy et al. and Cheney et al. it is clear that Cheney

et al. does not mitigate the substantially complete deficiency of Macy et al. and is not properly combinable therewith for lack of motivation for any modification to be found within the references themselves. The teachings or suggestions of Cheney et al. would have no function in the environment of Macy et al. and, at best they are merely usable together (e.g. Cheney et al. providing decoded image values in which a watermark might be found by the apparatus of Macy et al.) while neither teaches or suggests any modification of the other, much less a modification that would answer the claims. As previously pointed out, Cheney et al. is directed to minimization of DRAM through use of a spill buffer. Cheney et al. does not appear to address the problems of decoding time and storage requirements incident to providing user control of image scaling and positioning and the synchronization of decoding appears to remain fixed to the display fields or frames (see column 14, lines 28 - 44) in a currently conventional manner and certainly does not teach or suggest or provide evidence of a level of ordinary skill in the art which would support a conclusion of obviousness in regard to the subject matter of independent claim 9 or dependent claim 2 (e.g. controlling scaling in a decoding path based on results of testing of spill buffer capacity). Therefore, the Examiner has not made and cannot make a *prima facie* demonstration of any claim based on the combination of Macy et al. and Cheney et al. It is further noted in this regard that the Examiner's discussion of the rejection based on the inclusion of Cheney et al. continues to refer to Sazzad et al., overcome and withdrawn in view of the previous response. Therefore, it is clear that the Examiner has at least not properly considered whether or not the combination of Cheney et al. with Macy et al. would be proper and certainly has not made a *prima facie*

demonstration of the propriety thereof by a clear and compelling logical line of reasoning.

In summary, it is respectfully submitted that both grounds of rejection asserted in the present action are clearly in error and, upon reconsideration, should be withdrawn, as is respectfully requested. No *prima facie* demonstration of obviousness has been made in regard to any claim in the application while it is clear that the references applied have been misconstrued through hindsight while explicit recitations have been ignored.

Additionally, it is respectfully submitted that the finality of the present office action is premature. It is axiomatic that an action should not be made final which does not contain a *prima facie* demonstration of the propriety of grounds of rejection contained therein. Moreover, it is clear that previous amendments did not necessitate the new ground of rejection since the Examiner failed to make a *prima facie* demonstration of the propriety of grounds of rejection contained in the previous office action. Accordingly, it is respectfully requested that the finality of the present office action be withdrawn and the above-requested amendment entered as a matter of right. In any case, it is respectfully submitted that no new issue can possibly be raised by the above-requested amendment which merely repeats, for emphasis, language already present in the claim and already the subject of a reference to antecedent language. Further, the entry of the above-requested amendment is well-justified as placing the application in condition for allowance or better form for appeal by materially reducing and simplifying potential issues and is literally confined to matters of form (e.g. completion of antecedent language correspondence) for which entry is clearly provided by 37 C.F.R. §1.116. Accordingly entry of the above-requested amendment is respectfully

requested while it is respectfully pointed out that the claims as finally rejected are clearly and patentably distinguished from the prior art applied even without entry of the above-requested amendment.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 09-0457.

Respectfully submitted,



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